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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BOMAR, THOMAS S	

ART UNIT	PAPER NUMBER
3672	

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/776,820	STARR ET AL.	
	Examiner	Art Unit	
	Shane Bomar	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: as currently worded, line 3 makes it appear as though the preconfigured division does not occur until disposal occurs; it is suggested that replacing "at" with --for-- in between "element" and "disposal" would resolve this issue and clarify the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 7-9, 13-21, 23, 26, 27, 29-35, 37, and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 2,780,294 to Loomis.

Regarding claim 1, Loomis discloses a disposable downhole tool comprising an elongated body 20; a compression element 18 situated about the elongated body; and at least one preconfigured division in the compression element, wherein the tool is capable of being disposed of in a wellbore because any downhole tool is disposable downhole, i.e., among other unforeseen problems, the rings 26 may break or the packer head 16 may become detached from the tubing 14 (see Figs. 1 and 3).

Regarding claim 2, the compression element at disposal of the disposable downhole tool comprises a plurality of preconfigured divisions segmenting the compression element into a plurality of segments 24 (see Figs. 1-4).

Regarding claims 3 and 4, the segments are substantially uniform in size and shape (see Figs. 1-4).

Regarding claims 7-9, the preconfigured divisions are at least partly formed downhole in response to at least one segmenting event, the event including compression of the compression element (see Fig. 3), and setting of the disposable downhole tool in a wellbore (see Fig. 3).

Regarding claim 13, the preconfigured divisions are at least partially formed prior to deployment of the disposable downhole tool in a wellbore (see Fig. 1).

Regarding claims 14 and 15, the segments are configured to sink in a wellbore while being run-in, and are configured to rise in a wellbore while being raised to the surface.

Regarding claims 16 and 17, the preconfigured divisions are substantially parallel to a longitudinal axis of the disposable downhole tool, and the preconfigured divisions segment the compression element into three or more segments (see Figs. 1-4).

Regarding claim 18, the preconfigured divisions at least substantially segment the compression element into the plurality of segments prior to deployment of the disposable downhole tool in a wellbore, and further comprising a retainer 26 to retain the segments in place about the elongated body while positioning the disposable downhole tool in a wellbore (see Fig. 1).

Regarding claims 19 -21, the retainer comprises an o-ring that is external to the compression element (see Figs. 1 and 3), and is an inherently fracturable constraint, depending on the force exerted on it.

Regarding claim 23, the preconfigured divisions at least substantially segment the compression element into a plurality of segments prior to deployment of the disposable downhole tool in a wellbore; and the plurality of segments are held together by an interlocking geometry prior to deployment of the disposable downhole tool in the wellbore (see Figs. 1, 2, and 5-7).

Regarding claim 26, the compression element is at least part of a sealing element of the disposable downhole tool (see col. 4, lines 28-31).

Regarding claim 27, the Applicant has admitted in paragraphs [0002] and [0003] that in is notoriously known in the art that packers and plugs can be used interchangeably to prevent or control flow of fluids in the wellbore, therefore the packer element 18 of Loomis can inherently be a plug.

Regarding claim 29, Loomis discloses a disposable downhole tool comprising a body 20; a compression element 18 coupled about the body, wherein the compression element is preconfigured at predefined locations for segmentation into a plurality of segments 24, wherein the tool is capable of being disposed of in a wellbore because any downhole tool is disposable downhole, i.e., among other unforeseen problems, the rings 26 may break or the packer head 16 may become detached from the tubing 14 (see Figs. 1-4).

Regarding claim 30, the compression element comprises a sealing ring disposed about the body (see col. 4, lines 28-31).

Regarding claim 31, the Applicant has admitted in paragraphs [0002] and [0003] that it is notoriously known in the art that packers and plugs can be used interchangeably to prevent or control flow of fluids in the wellbore, therefore the packer element 18 of Loomis can inherently be a plug.

Regarding claim 32, in describing the operation of the device, Loomis inherently discloses a method for disposing of a downhole tool, comprising the steps of: deploying the downhole tool in a wellbore; setting the downhole tool in the wellbore; releasing the downhole tool in the wellbore; and segmenting a compression element of the downhole tool to aid disposal of the downhole tool in the wellbore (see col. 5, lines 15-46).

Regarding claim 33, the method of claim 32 further comprising the step of segmenting the compression element of the downhole tool in response to at least a downhole event (see Fig. 3).

Regarding claim 34, the method of claim 32 wherein the compression element of the downhole tool is at least substantially presegmented prior to deployment of the downhole tool in the wellbore (see Figs. 1 and 2).

Regarding claim 35, the method of claim 32 further comprising the step of segmenting the compression element of the downhole tool in connection with setting the downhole tool in the wellbore (see Fig. 3).

Regarding claim 37, the method of claim 32 further comprising the step of segmenting the compression element of the downhole tool into a plurality of segments (see Fig. 3 and 4).

Regarding claim 38, the method of claim 32 wherein the compression element comprises at least part of a sealing element of the downhole tool (see col. 4, lines 28-31).

4. Claims 1-4, 7-21, 23, 24, 25, 27, 29, and 31-37 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 5,350,016 to Thornton, Jr.

Regarding claims 1-4, 7-9, 13, 16-20, 23, 24, 25, 29, 32-35, and 37, in Figures 5-17 (see also the grooves in Fig. 17 for o-ring placement), Thornton discloses a segmented slip that is analogous to the segmented element 18 of Loomis, and therefore discloses the same limitations as Loomis disclosed in the respective claims above. With respect to claim 25, it would be inherent that when a plurality of sealing elements are used that one or more of the elements could be turned on the body, either during assembly or during run-in, and would therefore create an offset between divisions in adjacent elements.

Regarding claims 1-4, 7, 8, 10-18, 21, 27, 29, 31-34, 36, and 37, it is further taught that it was notoriously known in the prior art that the segmenting occurs in connection with releasing the downhole tool, with releasing the compression element from a compression state, and/or with the destruction of one or more substantial structural parts of the disposable downhole tool in a wellbore (see Figs. 1-4 and col. 2, line 56 through col. 3, line 67).

5. Claims 1, 2, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 5,701,959 to Hushbeck et al.

In Figures 5-7 and column 10, lines 27-42, Hushbeck et al disclose a segmented element with a plurality of segments 150, wherein the plurality of segments are held together, at least in part, with an adhesive prior to deployment of the disposable downhole tool in the wellbore.

6. Claims 1-9, 13, 16, 24-26, 28-30, 32-35, 37, and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by US patent application publication 2003/0213601 to Schwendemann et al.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

In Figures 1-3 and 7, and in paragraphs [0031, for a plurality of compression elements] and [0050], Schwendemann et al disclose a segmented element 190 that is analogous to the segmented element 18 of Loomis, and therefore discloses the same limitations as Loomis disclosed in the respective claims above. It is also of note that the range of hardness given in claim 6 covers nearly the whole range of known shore durometer A scale hardness, therefore, the elastomer disclosed by Schwendemann et al inherently falls out in this range. With respect to claim 25, it would be inherent that when a plurality of sealing elements are used that one or more of the elements could be turned on the body, either during assembly or during run-in, and would therefore create an offset between divisions in adjacent elements.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 10-12 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loomis.

Loomis teaches the disposable downhole tool and method of disposing of the tool from claims 7 and 32 above, wherein the compression element of the tool is segmented. However, it is not explicitly taught that the segmenting occurs in connection with releasing the downhole tool, with releasing the compression element from a compression state, or with the destruction of one or more substantial structural parts of the disposable downhole tool in a wellbore. At the time the invention was made, it would have been obvious to one of ordinary skill in the art that, if the packing 18 were to be placed in an area downhole where the inner diameter of the casing became too large (i.e., if the casing has unknowingly deteriorated and/or the wellbore collapsed in this area) then, upon actuation of the device, the rings 26 would become overstressed and be destroyed. Thereafter, the segments 24 would simply go past the edge of packer head 16 and either fall into the wellbore, or become caught up in the production/drilling fluids. Evidence of such events can be seen in Figures 1-4 of US patent 5,350,016.

Response to Arguments

9. Applicant's arguments filed February 24, 2006 have been fully considered but they are not persuasive.

a. With respect to the Loomis reference, while the packer assembly is taught as being reusable, it is respectfully contended that any tool is capable of being disposed of in a wellbore because of many unforeseen, yet notoriously known, accidents or downhole events that require said tool to be left downhole. The claims merely state that the tool is

disposable, which means that it is capable of being disposed of downhole, therefore the claims are silent as to how the tool is actually disposed of. In this case, the prior art discloses all of the structure of the claimed invention and only needs to be capable of performing the functional language of the claim, which is "at disposal of the disposable downhole tool." As stated previously, any downhole tool is capable of being disposed of in a wellbore, although it is agreed that the disposal is not always desirable. And as stated in the 103 rejection in view of Loomis, Thornton shows specific evidence of presegmented well tools experiencing over-compression, breaking apart, and being lost downhole.

b. With respect to the Thornton reference, I do see the slip 8 as a compression element because it must be compressed between elements 7 and 13 before it can be set or disposed of in the wellbore. I also did not use this reference against claim 28, so it does not need to disclose an external sealing element. Although Thornton does say that it is undesirable for the parts to fall into the wellbore and become useless debris, the reference still discloses that such an event is known to occur, and when said event occurs, then the slip segments would be disposed of in the bottom of the wellbore, just as Figure 6 of the present invention shows.

c. With respect to Hushbeck, for reasons analogous to those stated with respect to Thornton, the shoe 150 is still subject to compression since the elements above and below the shoe are pressed against it during actuation of the tool.

d. With respect to Schwendemann, for reasons analogous to those stated with respect to Loomis, any downhole tool is capable of being disposed of in a wellbore, and the presegmented sealing element 190 would be no exception.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 571-272-7026. The examiner can normally be reached on Monday - Thursday from 6:30am to 4:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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tsb
May 12, 2006